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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/995,775	11/29/2001	Evelyn Duesterwald	10011514-1	1693
22879	7590	04/30/2004	EXAMINER	
HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400			KIM, KENNETH S	
		ART UNIT	PAPER NUMBER	
		2111	5	

DATE MAILED: 04/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/995,775

Applicant(s)

DUESTERWALD ET AL.

Examiner

Kenneth S KIM

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

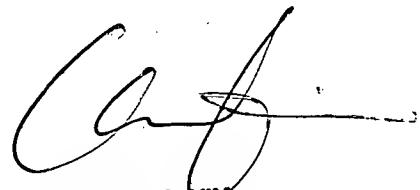
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) Responsive to communication(s) filed on 29 November 2002.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-22 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.



KENNETH S. KIM  
PRIMARY EXAMINER

### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    - a) All    b) Some \* c) None of:
      1. Certified copies of the priority documents have been received.
      2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
      3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   |   |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>4</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
|  | 6) <input type="checkbox"/> Other: _____  |

1. Claims 1-22 are presented for examination.
2. The abstract of the disclosure is objected to because the current abstract does not reflect the inventive feature of the claimed invention to distinguish over the prior art. Correction is required. See MPEP § 608.01(b).

All amended abstracts are to be submitted on a **separate sheet** (without the brackets and underlines) in addition to a mark-up copy.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

- (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
- (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1- 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Dockser, U.S. Patent No. 5,862,370.

Dockser teaches the invention as claimed in claim 1 including a method for dynamically patching code, comprising the steps of:

- (a) intercepting program instructions (col. 4, line 66),

- (b) determining if a program instruction requires unavailable hardware functionality (col. 5, line 33),
- (c) dynamically replacing the program instruction with a replacement instruction that does not require unavailable hardware functionality if it is determined that the program instruction requires unavailable hardware functionality (col. 5, line 34), and further teaches as in claims 2-8,
- (d) wherein the replacing comprises fetching a replacement instruction and storing it in a code cache (instructions are stored in cache 60) and executing (50) – claims 2 and 3,
- (e) wherein replacement instruction comprises part of a patch that is made available via an application program interface (col. 5, lines 23-27) – claim 4,
- (f) prior to determining if a program instruction requires unavailable hardware functionality, determining if the program instruction has been cached and executing the cached instruction (cached instructions are conventionally fetched from cache and executed; col. 4, line 30) – claims 5 and 6,
- (g) prior to intercepting program instructions, gaining control over execution of program instructions by injecting a dynamic execution layer interface into the program (layer configuring the filter 40; col. 5, line 28) – claim 7, and
- (h) dynamically receiving information about unavailable hardware functionality and replacement instructions (col. 6, line 1) – claim 8,

The system claims 9-12, the program product claims 13-16, the method claims 17-20, and the execution layer interface claims 21 and 22 are equivalently rejected based on the same reason.

5. Claims 1-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Giles et al, U.S. Patent Application Publication No. 2002/0133810.

Giles et al teaches the invention as claimed in claim 1 including a method for dynamically patching code, comprising the steps of:

- (a) intercepting program instructions (102; par. 31, line 5),
- (b) determining if a program instruction requires unavailable hardware functionality (needs to be emulated; 104, par 34, line 15),
- (c) dynamically replacing the program instruction with a replacement instruction that does not require unavailable hardware functionality if it is determined that the program instruction requires unavailable hardware functionality (par.34, line 18), and further teaches as in claims 2-8,
- (d) wherein the replacing comprises fetching a replacement instruction and storing it in a code cache (par.36, lines 2) and executing (par 36, line 4) – claims 2 and 3,
- (e) wherein replacement instruction comprises part of a patch that is made available via an application program interface (par. 34, line 22) – claim 4,
- (f) prior to determining if a program instruction requires unavailable hardware functionality, determining if the program instruction has been cached and executing the cached instruction (par. 35, line 23) – claims 5 and 6,
- (g) prior to intercepting program instructions, gaining control over execution of program instructions by injecting a dynamic execution layer interface into the program (par. 35, line 19) – claim 7, and

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(h) dynamically receiving information about unavailable hardware functionality and replacement instructions (information required for translation) – claim 8,

The system claims 9-12, the program product claims 13-16, the method claims 17-20, and the execution layer interface claims 21 and 22 are equivalently rejected based on the same reason.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Takata taught a micro-controller with modifiable program.

Hohensee et al taught a method of using fix-up code for non-aligned memory access instructions.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth S KIM whose telephone number is (703) 305-9693. The examiner can normally be reached on M-F (8:30-17:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached on (703) 305-4815. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

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April 27, 2004



KENNETH S. KIM  
PRIMARY EXAMINER